

# Ohio Beetles Bulletin

Occasional Publication of the Ohio Coleopterists

Edited By: Ken Karns

[Species@columbus.rr.com](mailto:Species@columbus.rr.com)

Issue Number: 3

June 2009



Tenebrionidae: ***Dioedus punctatus*** LeConte

The Ohio Beetles Bulletin (OBB) was developed to provide the Ohio Coleopterists membership a means of communication between issues of the Ohio Coleopterists Newsletter. Prior methods of communication via e-mail messages lacked the substance and sophistication the OC membership deserves. It is hoped the OBB will fill this void and provide an informative and enjoyable means of sharing information on the fascinating world of Beetles.

***"When we have experienced the atavistic joy of collecting in the open air and the manipulative pleasure of setting and mounting our chosen beetles there follows the refined intellectual delight of naming them with precision".***

Quote by G.B. Walsh taken from the first edition of the Coleopterists Handbook. W.J.B. Crotch, General Editor London, December 1953.

**Cover Photo:** *Dioedus punctatus* LeConte (Tenebrionidae) Collected from red rotten oak via Berlese extraction. 05-June-2009 Ross County, Ohio. Specimen 3.2 mm. Ken Karns Collection. Determined by: Vassili Belov.

# *Eudesma undulata* (Melsheimer)

## Colydiidae

Notes on Collection and Biology of this rare and seldom seen beetle.



Figure 1. *Eudesma undulata* in its natural habitat on large *Quercus* sp. log. Photo taken at night, illuminated with a headlamp, by Ken Karns 01-May-2009 Ross County, Ohio.

It is only through an exhaustive search of our favorite collecting grounds, utilizing varied collecting techniques, at all times of the year do we gain anything close to a synoptic assemblage of a desired taxon. And so it is with the Coleoptera, many remaining rare and elusive and some, just require being at the right place at the right time.

That happened to be 24-April-2009 at Scioto Trail State Forest where I discovered a population of the exceedingly rare Colydiidae, *Eudesma undulata* (Melsheimer). On that day I discovered two specimens on the trunk of timbered oak tree which was lying on the ground with most of the bark removed. This was during the day and both specimens were setting motionless in small depressions in the wood grain. A search of the entire log revealed no additional specimens. I was planning to run some lights that night with the intention of checking this log and additional ones after dark. Searching the log surfaces at night revealed numerous additional specimens with a total of 8 being taken that night. Additional specimens were either collected or observed on 26-April, 30-April, 01-May, and 07-May-2009.

Very little has been documented regarding the biology of this rare and seldom seen beetle. Karl H. Stephan, in his 1989 revision of the Bothrideridae and Colydiidae of America north of Mexico, had only seen 3 specimens, 1 from Virginia and 2 from Illinois. Unfortunately none of these specimens carried collection data.

Karl Stephan goes on to say that “the only clue to its habits comes from Blatchley (1910:553). He (Blatchley) mentions that Dury found specimens running up and down and burrowing in the bark of a Buckeye log”. I traced back Dury’s observations regarding Eudesma, in the Journal of the Cincinnati Society of Natural History, April-July 1895 in which he states “Melsheimer’s type has been for years the sole representative of this species and is in Dr. LeConte’s collection in Philadelphia its locality was “Penn”. Mr. C.G. Siewers re-discovered the species (one specimen) under the bark of a Sycamore tree July 1879. In August 1880, while hunting in the crevices of a decaying buckeye log for minute insects, I took several more of this very rare insect.” I could not find where Dury mentions the observation of the beetle burrowing in the bark of the Buckeye log and during that collection Dury took 6 specimens. As recent as 2002 in the two volume series American Beetles by Ross H. Arnett et al., Michael A. Ivie, author of the section on Colydiidae, comments regarding *E. undulata* as “a rare species known only from Illinois, Indiana, Ohio and Pennsylvania. The series I collected/observed likely represents the largest population ever recorded (over 30 specimens) at one locality.



Figure 2. Large *Quercus* sp. log with most of the bark stripped off. Specimens of *Eudesma undulata* only found on bare wood surface.

Based on my observations over a two week period beginning in late April, *Eudesma undulata* occurred only on *Quercus* sp. logs (3 different logs located some distance apart and one over a half mile away) and only on the exposed wood surface where the bark had been removed or fallen off. Despite a detailed search of other tree species, *E. undulata* was not found nor was it found on or under the bark of the oak logs. The beetle was only found on the bare wood surface which was not rotten or decayed and had evidence of multiple surface fungus species. Despite both mercury vapor and UV lights set within 30 feet of a log with visible *E. undulata* individuals, none were attracted to the lights. No specimens were observed flying and none could be provoked to fly. Although diurnal, there was a significantly larger observable population at night. The beetles were not overly active day or night and did not run about as Blatchley states was observed by Dury 1880. I observed two pairs of *E. undulata* in copula on the *Quercus* sp. log (figure 2.) suggesting this is in fact at least one of this beetles host wood. None were observed actually ovipositing but due to the beetles lack of interest in flying it would be doubtful it would take flight to lay eggs on another host. Lindgren funnel traps located in the general area did not contain any *E. undulata*.

Other associated coleoptera included numerous specimens of the Colydiidae, *Colydium lineola* Say (Figure 4.). This beetle was observed entering and exiting holes made by an unknown Scolytid(s). The common Brentidae, *Arrhenodes minutus* (Drury) was seen in good numbers (Figure 5.) with the males often seen in a “guarding” posture over selected females. The males would position themselves at an oblique angle with their head and mandibles resting over the elytra of the female. If another male approached the guarding male would grapple briefly and defend his prize. Can’t believe I didn’t get a picture of this behavior, geesh!



Figure 3. Beautiful specimen of *Eudesma undulata* (Melsheimer) collected 24-April-2009, Ross County, Ohio by Ken Karns.

I would be interested in hearing from anyone who has encountered this species and any information they would like to share. OC member Bob Andrew reportedly collected a specimen(s) of this beetle under similar circumstances on the exposed wood (bark removed) of a maple in Vinton County, Ohio some years ago (pers. communication).

Note: If anyone would like an example(s) of *E. undulata* please contact me for a possible exchange for other interesting and needed North American Coleoptera.



Figure 4. Specimen of *Colydium lineola* Say. At the entrance to an unknown burrow (Scolytid?).



Figure 5. Male *Arrhenodes minutus* (Drury) ready for battle. Many observed “guarding” females.